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Reviewer: Anne Corrigan

Timestamp: Wed Aug 08 11:54:07 EDT 2007

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Application No: 10780638

Version No: 2.0

Input Set:**Output Set:****Started:** 2007-08-07 17:13:50.435**Finished:** 2007-08-07 17:13:52.249**Elapsed:** 0 hr(s) 0 min(s) 1 sec(s) 814 ms**Total Warnings:** 33**Total Errors:** 0**No. of SeqIDs Defined:** 33**Actual SeqID Count:** 33

Error code	Error Description
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W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
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W 213	Artificial or Unknown found in <213> in SEQ ID (7)
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Input Set:

Output Set:

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Error code

Error Description

This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Commonwealth Scientific and Industrial Research Organization

<120> Efficient gene silencing in plants using short dsRNA sequences

<130> BCS-03-2001

<140> 10780638

<141> 2004-02-19

<150> US 60/447,711

<151> 2003-02-19

<160> 33

<170> PatentIn version 3.3

<210> 1

<211> 341

<212> DNA

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<223> sequence of the promoter of the 7SL-2 gene of Arabidopsis thaliana var. Landsberg erecta

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<223> PolIII promoter region

<220>

<221> misc_feature

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<223> SalI restriction site

<220>

<221> misc_feature

<222> (329)..(335)

<223> poly T nucleotide stretch

<220>

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tctcttcttc tatcttaaatt ctgtgtatac tatttcaacta ttgggctttt tattagtcta 180
 taatgggact caaaataagg ctttggccca catcaaaaag ataagtcaca aatcaaaaact 240
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<223> poly T stretch

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<222> (424)..(429)

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 ctctcttctt ctatcttaaa tctgtgtata ctatttcaact attgggcttt ttattagtct 180
 ataatgggac tcaaaataag gctttggccc acatcaaaaa gataagtcac aaatcaaaac 240
 taaattcaga gtcttttctc ccacatcggt cactgtactc ttttgtgttt gtttatatat 300

tacacgaacc gatcttttggc acgtcgagct aagtaacatg agcttgtaac ccatgtgggg 360

acattaagat ggtggaacac tggctcgggt ccacgggccg gttctgttgt cgactttttt 420

tttctcgag 429

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<220>

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<222> (1)..(6)

<223> EcoRI restriction site

<220>

<221> misc_feature

<222> (7)..(313)

<223> Pol III promoter region

<220>

<221> misc_feature

<222> (314)..(319)

<223> PvuI restriction site

<220>

<221> misc_feature

<222> (320)..(328)

<223> poly T stretch

<220>

<221> misc_feature

<222> (329)..(334)

<223> EcoRI restriction site

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agatctgttt tggctatgtt ggacgaaaca agtgaacttt taggatcaac ttcagtttat 120

atatggagct tatatcgagc aataagataa gtgggctttt tatgtaattt aatgggctat 180

cgtccataga ttcactaata cccatgccca gtacccatgt atgcgtttca tataagctcc 240

taatttctcc cacatcgctc aaatctaaac aaatcttggt gtatatataa cactgaggga 300

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<220>
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 <223> EcoRI restriction site

<220>
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 <222> (7)..(446)
 <223> Pol III promoter region

<220>
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 <222> (447)..(452)
 <223> XhoI restriction site

<220>
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 <222> (453)..(461)
 <223> poly T stretch

<220>
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 <222> (462)..(467)
 <223> EcoRI restriction site

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 agatctgttt tggctatggt ggacgaaaca agtgaacttt taggatcaac ttcagtttat 120
 atatggagct tatatcgagc aataagataa gtgggctttt tatgtaattt aatgggctat 180
 cgtccataga ttcactaata cccatgccca gtacccatgt atgcgtttca tataagctcc 240
 taatttctcc cacatcgctc aaatctaaac aaatcttggt gtatatataa cactgaggga 300
 gcaacattgg tcacgacctt acttgaacag gatctgttct ataggctcgt acctctgttt 360
 ccttgatttc tcaagagaca ggcccttaac cctggttgat gaaccatgac cgtgcggcta 420
 gagcgtgatt gacggctacg atcgctctcg agtttttttt tgaattc 467

<210> 5
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 <212> DNA
 <213> Artificial Sequence

<220>

<223> sequence of the promoter of the U6-26 snRNA gene of Arabidopsis thaliana var. Landsberg erecta including 3 bases downstream of the transcription initiation site, followed by a unique restriction site in front of an oligo dT stretch

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<221> misc_feature

<222> (1)..(6)

<223> XhoI restriction site

<220>

<221> misc_feature

<222> (7)..(436)

<223> Pol III promoter region

<220>

<221> misc_feature

<222> (437)..(442)

<223> SalI restriction site

<220>

<221> misc_feature

<222> (443)..(450)

<223> poly T stretch

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<222> (451)..(456)

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<400> 5

ctcgagcttc gttgaacaac ggaaactcga cttgccttcc gcacaataca tcatttcttc	60
ttagcttttt ttcttcttct tcgttcatac agtttttttt tgtttatcag cttacatttt	120
cttgaaccgt agctttcgtt ttcttctttt taactttcca ttcggagttt ttgtatcttg	180
tttcatagtt tgtcccagga ttagaatgat taggcacga accttcaaga atttgattga	240
ataaaacatc ttcattctta agatatgaag ataattctta aaaggccctt gggaatctga	300
aagaagagaa gcaggcccat ttatatggga aagaacaata gtatttctta tataggccca	360
tttaagttga aaacaatctt caaagtccc acatcgctta gataagaaa cgaagctgag	420
tttatataca gctagagtcg actttttttt gagctc	456

<210> 6

<211> 488

<212> DNA

<213> Artificial Sequence

<220>

<223> sequence of the promoter of the U6-26 snRNA gene of Arabidopsis thaliana var. Landsberg erecta including 20 bases downstream of the transcription initiation site, followed by a unique restriction site in front of an oligo dT stretch

<220>

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<222> (1)..(6)

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<220>

<221> misc_feature

<222> (7)..(468)

<223> Pol III promoter region

<220>

<221> misc_feature

<222> (469)..(474)

<223> PvuI restriction site

<220>

<221> misc_feature

<222> (475)..(482)

<223> Poly T stretch

<220>

<221> misc_feature

<222> (483)..(488)

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ttagcttttt ttcttcttct tcgttcatac agtttttttt tgtttatcag cttacatttt 120

cttgaaccgt agctttcgtt ttcttctttt taactttcca ttcggagttt ttgtatcttg 180

tttcatagtt tgtcccagga ttagaatgat taggcacga accttcaaga atttgattga 240

ataaaacatc ttcattctta agatatgaag ataattctca aaaggccctt gggaatctga 300

aagaagagaa gcaggcccat ttatatggga aagaacaata gtatttctta tataggccca 360

tttaagttga aaacaatctt caaaagtccc acatcgctta gataagaaaa cgaagctgag 420

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<212> DNA

<213> Artificial Sequence

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<223> sequence of the promoter of the U3 snRNA of rice (*Oryza sativa*
Indica IR36)

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<220>

<221> misc_feature

<222> (7)..(384)

<223> Pol III promoter region

<220>

<221> misc_feature

<222> (385)..(390)

<223> PvuI restriction site

<220>

<221> misc_feature

<222> (391)..(399)

<223> poly T stretch

<220>

<221> misc_feature

<222> (400)..(405)

<223> EcoRI restriction site

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aagttatcag gcatgcatgg atcttgagg aatcagatgt gcagtcagg accatagcac 120

aggacaggcg tcttctactg gtgctaccag caaatgctgg aagccgggaa cactgggtac 180

gttggaacc acgtgatgtg gagtaagata aactgtagga gaaaagcatt tcgtagtggg 240

ccatgaagcc tttcaggaca tgtattgcag tatgggccgg cccattacgc aattggacga 300

caacaaagac tagtattagt accacctcgg ctatccacat agatcaaagc tggtttaaaa 360

gagttgtgca gatgatccgt ggcacgatcg ttttttttg aattc 405

<210> 8

<211> 442

<212> DNA

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variety with small gourd-shaped yellow fruit)

<220>

<221> misc_feature

<222> (1)..(6)
<223> EcoRI restriction site

<220>
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<223> Pol III promoter region

<220>
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<222> (422)..(427)
<223> PvuI restriction site

<220>
<221> misc_feature
<222> (428)..(436)
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<220>
<221> misc_feature
<222> (437)..(442)
<223> EcoRI restriction site

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gaattattat ggagttcatg gcaactgcta tggagttttt cctactggga attggaacgg 180

tttctacgaa attaactgtc cacacgttaa aaatataaat taatgcgtaa ttgttatttt 240

ttctataaca aataaaaaaac tgaaatacga cataaatttt attacttta ttgcacttta 300

gccttagaga tattgcgttg tagtcggcgt aggtgtgtca ggggccaata tattgttccc 360

acatcggcag tgcagcacat aaactctagc gttataagaa tctatccact atcaacggtc 420

acgatcgttt ttttttgaat tc 442

<210> 9
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<220>
<223> sequence of the dsRNA encoding region of 94bp for silencing
expression of the GUS gene (GUShp94)

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<222> (1)..(6)
<223> SalI restriction site

<220>

<221> misc_feature
<222> (6)..(11)
<223> PvuI restriction site

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<222> (12)..(100)
<223> GUS sequence (sense)

<220>
<221> misc_feature
<222> (101)..(195)
<223> spacer sequence

<220>
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<222> (190)..(195)
<223> BamHI restriction site

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<222> (196)..(284)
<223> GUS sequence (antisense)

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<222> (285)..(290)
<223> PvuI restriction site

<220>
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<222> (290)..(295)
<223> SalI restriction site

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gtggtgacgc atgtcgcgca agactgtaac cacgcgtctg ttgactggca ggtgggtggcc 120

aatggtgatg tcagcgttga actgcgtgat gcgcatcaac aggtggttgc aactggacaa 180

ggcactagcg ggatccagac gcgtgggttac agtcttgccg gacatgcgtc accacggtga 240

tategtccac ccaggtgttc ggcgtgggtgt agagcattac gctgcgatcg tcgac 295

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expression of the GUS gene (GUShp41)

<220>

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<220>
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<220>
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<220>
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<222> (88)..(93)
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caccacgatg ccatgttcat ctgccagtc gac 93

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expression of the GUS gene (GUShp21)

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<220>
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<222> (29)..(44)
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 (PHYB5hp42)-upper strand

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 accgccacgg ccaccgccac tcccccgac tccg 94

<210> 13
 <211> 94
 <212> DNA
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<220>
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 (PHYB5hp42)-lower strand

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 (PHYB5hp21)-lower strand

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 expression of the PHYB gene, derived from the center of PHYB
 (PHYBChp42)-upper strand

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 <212> DNA
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<220>
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 (PHYBChp42)-lower strand

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<212> DNA
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<220>
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expression of the PHYB gene, derived from the center of PHYB
(PHYBChp21)-lower strand

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<212> DNA
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<220>
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(PHYB3hp42)-upper strand

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atcatgtcac cacttcact agcagttgac aatg 94

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expression of the PHYB gene, derived from the 3' end of PHYB
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atcatgtcac cacttcact agcagttgac aatg 94

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<212> DNA

<213> Artificial Sequence

<220>

<223> sequence of the dsRNA encoding region of 21 bp for silencing
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<211> 94

<212> DNA

<213> Artificial Sequence

<220>

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expression of the PDS gene (PDS42)-upper strand

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ccggttagga tcgtaatatt ccttacaagt taag 94

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<212> DNA

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expression of the PDS gene (PDS